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**SCIENTIFIC INFORMATION REPORT
CHINESE SCIENCE**

(28)

339 386

Summary No. 4820

17 July 1963

Prepared by

Foreign Documents Division
CENTRAL INTELLIGENCE AGENCY
2430 E St., N. W., Washington 25, D. C.

AUG 18 1963

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C-0-N-F-I-D-E-N-T-I-A-L

SCIENTIFIC INFORMATION REPORT

Chinese Science (28)

This is a serialized report consisting of unevaluated information prepared as abstracts, summaries, and translations from recent publications of the Sino-Soviet Bloc countries. Individual items are unclassified unless otherwise indicated.

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CHEMISTRY AND CHEMICAL TECHNOLOGY

CHLORAMPHENICOL ANALOGUE SYNTHESIZED AND ANTIBACTERIAL ACTIVITY TESTED ---
Peiping, Scientia Sinica, vol 12, Jun 63, pp 869-877

[The following is the summary appearing at the end of an English language article, "Synthesis of Compounds Related to Chloramphenicol, IV, 3-(o-Hydroxy-p-Nitrophenyl)-2-Dichloroacetamido-Propanol," by Kao I-sheng (7559/1837/3932) and P'an Pai-ch'u'an (3382/4102/1557) of the Institute of Materia Medica, Chinese Academy of Sciences. Additional data contained in the source are also given below.]

The synthesis of a chloramphenicol analogue, 3-(o-hydroxy-p-nitrophenyl)-2-chloroacetamido-propanol (V), and its related compounds from o-acetoxy-p-nitrobenzyl bromide (VII) or o-methoxy-p-nitrobenzyl bromide (VIII) has been described. The antibacterial test showed that the compound (V) was devoid of action against *Staphylococcus aureus* and *E. coli*.

This article was first published in Chinese in *Acta Chimica Sinica*, Volume XXVIII, No 6, 1962, pages 372-378. The authors express their gratitude to the Microanalytical Department of their institute for carrying out the microanalysis recorded in this article. The authors used four English-language references, dated 1951-1954, and two written by themselves, dated 1958-1960.

RADIATION CHEMISTRY AND THE CHEMICAL INDUSTRY -- Peiping, K'o-hsueh Hua-pao, No 11, Nov 62, pp 401, 402

[The following is a descriptive abstract of an article co-authored by Liu Yu-ming (0491/6877/6900) and Hung Jui-hsiang (3163/3843/4382) of the Shanghai Academy of Chemical Industry.]

In this article, the authors review the development of experimental radiation chemistry and consider its prospective applications to the inorganic chemical industries. They discuss the advantages of using chemical reaction piles for the production of nitrogen, sulfuric acid, nitrates, oxone, and several other chemicals. They provide figures on the production rates for the individual chemicals per 100 electron volts of energy supplied, but they do not state that any of this work was done in China; and in one case, they state specifically that the figures are from foreign work. The authors also discuss the effects of radiation in increasing the activity of various catalysts. The article is accompanied by several illustrations and block diagrams pertaining to the application of radiation to chemical production processes. [For Official Use Only]

CHINESE TRANSLATION OF FOREIGN MACROMOLECULAR RESEARCH -- Peiping,
Kao-fen-tzu Ts'ai-liao K'uai-pao (Express Bulletin on Macromolecular
Materials), No 17-18, 27 Sep 62

[The following three articles from Russian and English
publications have been translated into Chinese and pub-
lished in the above source.]

1. "The Polymerization of Vinyl Chloride by Gamma-Radiation," by
L. D. Bubis, et al, originally appearing in Balsticheskiye Massy, No 4,
1962, pages 4-6, translated by kuo hua (0948/5478).

2. "Fibrous Acetalization of Polyethylene Glycol Using cis-Propylene
Dialdehydes," by A. I. Meos, et al, originally appearing in Khimicheskie
Molokiy, No 4, 1961, pages 19-21, translated by Lo Ch'eng-ming (7482/
2052/2494)

3. "Cis-Polybutadiene Rubber Compounding Methods," originally
appearing in Rubber World, No 11, 1961, page 70, translated by
Wang Yen-fan (3769/5888/5603). (CONFIDENTIAL)

NYLON-6 SPHERULITES OBSERVED --- Peiping, Scientia Sinica, Vol 12, Jun 63,
pp 910-912

The following is a descriptive summary of an English-
language note, "Some Observations of the Spherulites of
Nylon-6 by Solvent Etching and by Iodine Treatment," by
Ch'ien Jen-yuan (6929/0086/0337) and Ch'en Shou-hsi (1715/
1108/5032). Additional data contained in the source are also
given below.7

The authors used a technique similar to that described by E. Khoury,
(Journal of Polymer Science, No 26, page 375) to observe and make photo-
micrographs of some spherulite structures in Nylon-6. They also tried
a novel technique of observing spherulites of Nylon-6 by iodine treatment
and stated that this convenient technique for texture studies of poly-
amides deserves further studies.

The authors, both of the Institute of Chemistry, Chinese Academy of
Sciences, wrote this note on 18 March 1963, using four English, one
Russian, one Japanese, and one Chinese language reference works, dated
1956-1962, the last of which was written by Ch'ien Jen-yuan and
P'an Chen-hua (3382/2182/5478).

DISLOCATION LINES AND NETWORKS IN MOLYBDENUM CRYSTALS AS REVEALED BY
ETCHING -- Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 909-910

[This short article was prepared jointly by Feng Tuan
7458/4551), Min Nai-pen (7036/0035/2609), and Li Chi
(2621/7871) of the Department of Physics, Nanking University.]

This is a laboratory notation on the study of dislocation etch-pits in molybdenum crystals. Molybdenum single crystals were ground with electron-beam floating zone melted substances. After filing and mechanical polishing, the specimen surfaces were further polished and then etched electrolytically. In this work, the experimenters chose the same reagent, which is a mixture of methyl-alcohol, sulfuric acid, and chloric acid (Volume ratio 30:6:13), for etching, as well as polishing. During polishing, the voltage was maintained at 8 volts, current density about 0.4 ampere/cm²; during etching, voltage was maintained at 2.5 volts, current density about 80 mA/cm².... There is a one-to-one correspondence between etch-pits and etch-lines. If these triangular etch-pits are identified as the sites of dislocations intersecting the surface, then etch-lines that correspond to dislocation almost parallel to the observation surface are convincingly demonstrated.

Seven sources were referred to in this article, including 2 Dutch, 2 British, 2 German, and one Russian.

HYPOTHESIS OF QUENCHED-IN VACANCIES IN AL AND AL PRIMARY SOLID
SOLUTIONS -- Peiping, Scientia Sinica, Vol 12 No 6, Jun 63, pp 891-907

[This article was written by Huang Yu-tu, 7806/3768/3877, member of the Institute of Metallurgy, Chinese Academy of Sciences, Shanghai]

This article deals in great detail with the subject of quenched-in vacancies in metals and alloys. Recently, physical metallurgists, as well as solid state physicists, had displayed considerable interest in this subject. Many factors, such as quenching temperatures, annealing temperatures, quenching speed, purity, characteristics of metals, and so forth, which affect the interaction of quenched in vacancies, complicate a quantitative analysis so that at the present time a unified theory for interpretation is still lacking. The purpose of this work is to develop an analytic method for describing the cause of isothermal annealing decay of quenched Al and Al primary solid solutions. A unified theory of interaction between quenched-in vacancies will be presented as summarized in three hypotheses as follows: hypothesis of down-quenching, hypothesis of isothermal annealing, and hypothesis of up-quenching.

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It is also suggested that the abovementioned three hypotheses may be applied to other metals and primary solid solutions for an interpretation of the behavior of quenched-in vacancies.

In this article, the author made references to 28 metallurgists in this field. Among these references, 9 were Americans, 3 British, 3 Japanese, 2 Germans, and 2 Chinese.

ABSTRACTION OF TANTALUM AND NIOBIUM -- Chungking, Yeh-chin K'uni-pao, Nov 62, No 33, pp 4-7

[This article on metallurgy is an abstract translation by Kao Ching-hua (7559/3237/5478) from the Japanese Journal Nihon Kinzoku Gakukai Shi, (Records of the Japanese Metalurgical Society), Vol 26, No 1, 1962, pp 52-65]

This article is a summary report of a chemical process for extracting high-quality tantalum (ta) and niobium (Nb) from mineral ores of Fe, Si, Sn, Ti, Al, Mn, and Cu, containing Ta or Nb. [FOR OFFICIAL USE ONLY].

COBALT BY THE WET SMELTING PROCESS -- Chungking, Yeh-chin K'uni-pai, No 33, Nov 62, pp 1-3

[This article is an abstract translation from the Russian magazine Ekspress Informatsiya Tsuetnoy Metalurgii (Express Information on Nonferrous Metallurgy) by Kou Chi-tan (5384/4949/5986).]

This article describes the method of refining cobalt pyrities by a process of successive treatments of the minerals with sulfuric acid, ammonia oxygen, and hydrogen to precipitate cobalt-ammonium sulfate and powdered cobalt.

[Comment: At present, cobalt is one of the scarce metals in Communist China. Cobalt is used in alloys to manufacture heat-resistant jet-engine turbines.] [FOR OFFICIAL USE ONLY]

PRODUCTION OF CARBON STEEL, NONCORROSIVE STEEL, STEEL BANDS, AND STEEL WIRES -- Chungking, Yeh-chiu K'um-bao, Nov 62, pp 7-8

[This article is an abstract translation by Ch'en Te-ming, (7115/1795/6900) of a Russian article appearing in the Soviet magazine Stal (Steel), 1962, No 6, pages 553-555, by Zhetven, N.B.]

In this article, the author explains the use of the continuous electrolytic acid pickling method for the production of carbon steel, noncorrosive steel, steel bands, and steel wires. Data on the various tests and researches were given for the making of such steel (alloys) as 0 Kh 18 N9, 1 KH 18 N9 T, Kh 18 N 11 M, Z I 991, Z I 349, and so forth in a heated tank of acid solution. Comparative data were also given in a table for various types of steel alloys using brine-type electrolytic tank and acid-type electrolytic tank. In the comparison of the two methods, the author stated that the production rate by the electrolytic acid pickling method can be 2-3 times greater than by the brine electrolytic tank method. [FOR OFFICIAL USE ONLY]

FOREIGN MATERIALS ON METALLURGY PUBLISHED -- Peiping, Yeh-chin K'uai-pao, (Express Bulletin on Metallurgy), No 22-23-24, 24 Aug 62

[The following six articles from Russian and English publications have been translated into Chinese and published in the above source.]

1. "The Effects of Heat-Machining Treatment Upon the Working Durability and Toughness of High-Speed Steels," by M. M. Shteynberg, et al, originally appearing in Metallovedenie i Termicheskaya Obrabotka Metallov, No 1, 1962, pages 29-30 and 35-37, translated by Liu Fu-yung (0491/4395/3938).
2. "The Properties of 3-Percent Chrome-Steel Rails," by Yu. V. Grdina, et al, originally appearing in Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 2, 1962, pages 125-130, translated by Hsiao Han-hsiung (5135/3352/7160).
3. "The Causes of Layer-Splitting in Pressure-Formed Metal-Powder Parts," by A. Z. Nikolayev, originally appearing in Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 2, 1962, pages 101-103, translated by Li Shih-wen (2621/1102/2429).

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4. "The Use of Carbon in the Reduction of Niobium Concentrates," by N. T. Lyakishev, et al, originally appearing in Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1962, pp 70-77, translated by Hsiao Han-hsiung.

5. "Boron and Cerium Alloy Treatment of 35 L Steel," by V. N. Gonchar and B. F. Ivantsov, originally appearing in Izvestiya VUZ, Chernaya Metallurgiya; translated by Hsiang Yu (0686/0327).

6. "Steel Produced From Copper Smelting-Plant Waste," originally appearing in Journal of Metals, No 2, February 1961, page 23; translated from Tsvetniye Metally, No 2, 1962, page 96, by Hsiang Yu.

MATHEMATICAL AND PHYSICAL SCIENCES

STUDY ON SUBALGEBRAS -- Peiping, Scientia Sinica, Vol 12, No 5, May 63,
p 739

[The following is a full translation of the Russian-language article, "On the Theory of Solvable Subrings for Alternating and Jordan Rings," written by Liu Shao-hsueh (0491/4801/1331) of Peiping Pedagogical University. The manuscript was received for publication on 12 December 1962.]

The solvable subalgebra (solvable subring, solvable subgroup) A of algebra (ring, group) R is, by definition, its subalgebra (subring, subgroup), which is a member of a certain normal series of algebra R . That is, there exist such subalgebras A_i , $i = 1, 2, \dots, n$, such that $A_1 = A$, $A_n = R$, $A_i \leq A_{i+1}$, and A_i is an ideal algebra of A_{i+1} , $i = 1, 2, \dots, n-1$. In sources 1, 2, and 3, there are constructed theories of solvable subsystems for the groups, Lie algebras, and associative rings, respectively. Source 4 supplements this theory for Lie algebras with one theorem. The purpose of this note is to submit certain analogous results for R which we have proved, where R will always denote the alternative ring or algebra over a given field, or the Jordan ring (in which, for $2a = 0$, there ensues $a = 0$), or algebra over a field of characteristic $p \neq 2$.

Theorem 1. If A is a solvable subalgebra of the algebra (ring) R , and $A^k = A^{k+1}$ (where $A^1 = A$, $A^{n+1} = A^n \cdot A$), then A^k is an ideal algebra (ring) R . In particular, if $A = A^2$, then A is ideal.

Theorem 2. If A, B is a solvable subalgebra of the finite algebra R (in case of a Jordan algebra, let the base field have characteristic zero), then the subalgebra $\{A, B\}$, generated by the solvable subalgebras A and B , is a solvable subalgebra of algebra R .

Theorem 3. Each subring (subalgebra) of the direct sum of $\{e\} \oplus R$, where $\{e\}$ is a subring (one-dimensional subalgebra), generated by the indempotent element e , and R is a nilpotent ring (algebra), is its solvable subring.

Theorem 4. Let R be a finite algebra (ring), and let one of the following conditions be fulfilled in it:

- a. Each of its subalgebras (subrings), generated by an indempotent element e , is a solvable subalgebra.
- b. Each of its maximum subalgebras (subrings) is a solvable subalgebra.

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Then R is the direct sum of the nilpotent algebra (ring) and generated by one idempotent element of the algebra (ring).

From the last theorem, especially if $R = R^2$ also, then such a finite ring is certainly commutative and associative, i.e., it is isomorphic to the ring of subtractions of the ring of whole integers.

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1. Wielandt, H., "Verallgemeinerung der invarianten Untergruppen", Math. Zeit., Vol 45, 1939, pp 209-244
2. Schenkman, E., "Theory of Subinvariant Lie Algebras," American Journal of Mathematics, Vol 73, 1951, pp 453-474
3. Baer, R., Meta Ideals: Report of a Conference on Linear Algebras, 1957. Washington. Pages 33-52
4. Barnes, D. W., "Nilpotency of Lie Algebras," Math. Zeit., Vol 79, No 3, 1962, pp 237-238

CHINESE MATHEMATICIAN DESCRIBES CHINESE VERSION OF PASCAL'S TRIANGLE -- Peiping, Ts'ung Yang-hui San-chiao T'sn-ch'i (On Yang-hui's Triangle), Chinese Youth Publishers, 1962, 54 pp.

[In this reprint of a monograph which first appeared in 1956, author Hua Lo-keng (5478/5012/1649) describes what is known in the West as Pascal's Triangle. In the foreword, he asserts that the triangle was invented in China at least 300 years prior to its appearance in Europe. Thanks are extended to P'an I-min (3382/0001/3046), who is credited with having done most of the writing, in accordance with Hua's outline.]

ULTRAHIGH VACUUMS OBTAINED BY MEANS OF AN OIL DIFFUSION PUMP WITH SILICA GEL TRAP -- Peiping, K'o-hsueh T'ung-pao, No 5, May 63, pp 41-42.

[Following is a descriptive abstract of an article co-authored by Kuo Yuan-heng (6753/0337/1854) of the Physics Department and Ku T'i-jen (6357/1912/0086) of the Chemistry Department, Peiping University.]

In this article, the authors describe improvements to a method proposed by D. Alpert in 1953 for the creation of ultrahigh vacuums by the use of a copper foil collector trap in an oil diffusion pump vacuum system. After reviewing the use of zeolite and activated aluminum oxide in such a system, the authors described their experiments in the use of silica gel in traps of three different shapes.

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In the experiments, they used a three-stage functioning oil diffusion pump, exhausting a system of about 2 liters capacity. The system was heated to 420 degrees centigrade for 10 hours, and for the final one or 2 hours, a suitable electron bombardment was directed at a type B-A ionization vacuum gage. It was found that during a period of one half hour, the pressure fell to 6×10^{-10} millimeters of mercury. After working the system continuously for 70 hours, there was no tendency for the pressure to rise.

The article cites four English language sources, three of them in the Review of Scientific Instruments, dated 1953-1960. Gratitude is extended to Prof Fu Ying (0265/7751) for his concern and guidance during the work and to Assistant Prof Wu Ch'uan-te (0702/0356/1795) and Mr Lou Ko (2869/2706) for their support.

POWER SYSTEM OSCILLATION ANALYZED -- Peiping, Wu-li Hsueh-pao, Vol 18, No 8, Aug 62, pp 411-421

[The following is translation of a Chinese abstract of an article, "Graphical Analysis of the Nonlinear Oscillation of Electric Power Systems," by Pao Ch'eng-chih (7637/1004/1807). The paper was received for publication in April 1962.]

In this paper, the author makes a complete topological analysis of an electrical machine oscillation problem governed by a third-order nonlinear equation of the following form:

$$A \frac{d^3\delta}{dt^3} + \frac{d^2\delta}{dt^2} - A \cot \delta \frac{d\delta}{dt} \frac{d^2\delta}{dt^2} + \left(\frac{P_1 A}{M} \cot \delta + C \sin^2 \delta \right) \frac{d\delta}{dt} + B \sin \delta - \frac{P_1}{M} = 0$$

A simple graphical method for the system performance computation is suggested and a numerical example is given as an illustration.

TECHNICAL SCIENCES

HIGHLIGHTS OF SECOND NATIONAL CONFERENCE ON CORROSION -- Peiping,
K'o-hsueh T'ung-pao, No 3, Mar 63, p 71

The Corrosion and Protection Section of the State Scientific and Technological Commission of the People's Republic of China held the Second National Conference on Corrosion and Corrosion Prevention in Shanghai on 18-25 December 1962.

It was attended by 171 representatives from 99 units. At the meeting, 73 reports of surveys and experimental research were read which dealt with such aspects as corrosion-resistant metals and methods of protection, metallic corrosion and testing methods, and the corrosiveness of nonmetals and their role in preventing corrosion. These reports reflected the growth of China's scientific and technical force and the progress that it has made in combating corrosion since the First National Conference on Corrosion and Corrosion Prevention held by the State Scientific and Technological Commission in 1960. Some of the work has already been incorporated into production; the level of research work has also improved.

China has made progress in the development of corrosion-resistant, nonmetallic materials and coatings. Asbestos-reinforced phenolic products, impermeable graphite products, polyvinyl chloride, various methods for providing surface coverings, sleeves, and liners, and polyvinyl thermoplastic coatings are beginning to play an important role in the chemical industry.

Judging from the reports on the observation of long-term operation of electromechanical products in tropical environments, as well as from the exhibit of more than 100,000 pictures showing experimental results, an understanding of the special requirements of some products has been obtained. Many different guide-type documents have been compiled. They can be used as references by departments concerned with machine building and also as general guides [on product specifications for tropical climates]. The many sealing oils developed in the past underwent years of testing. Several were found to provide protective seals which last 2-3 years. This paved the road for [China's] planned technical advance. Long-term observations disproved the idea published in foreign sources that certain copper, zinc, and aluminum alloys are not suitable for electromechanical devices in tropical climates.

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An even broader use has been found for corrosion-resistant nickel plating and protective aluminum sprays. The use of a certain kind of material in place of steel alloys solved the problem of corrosion due to ammonium bicarbonate. As a result of research, a set of protective measures concerning [corrosion due to] the electrolysis of NaCl was drawn up.

Research on the corrosion of steel used in reinforced concrete has also had a good beginning. The post and telegraph departments have experimented with methods of protecting cathodes in telegraph cables from corrosion.

Research work has also been done in such aspects as surface alloying, anode protection, acid-resistant cements, soil corrosion, and passivation and hyperpassivation.

During the conference, a scientific symposium on grain boundary corrosion in stainless steels was held. The Research Institute of Watercraft of the Ministry of Communications initiated discussions on the problem of corrosion of steel vessels due to [human and animal] excrement.

Lastly, it was decided to compile all reports into one volume, and an editorial committee headed by SHIH Shen-f-t'ai (4258/5116/3141) was elected.

ANTICORROSION OF STEEL BARGES -- Feiping, Jen-min Jih-pao, 29 May 63,
p 2

In an effort to prevent the corrosion of steel plates on agricultural barges, technologists of the Shanghai Municipal Boat Building Department and the Chemical Engineering Department have finally finished testing a new kind of anticorrosion paint after several months of research work. Recently a number of steel barges coated with new type of anti-corrosion paint were shipped to the villages in Kiangsu Province for testing. The agricultural steel barges are often used to haul dung, river mud, chemical fertilizer, gravels and rocks, coal, etc, and these barges are usually exposed to wind and rain. The paint on these barges often cannot resist acid corrosion and the hard wear and tear in the shipment of cargo. Damaged steel plates of the barges are easily corroded. For this reason, it is necessary to find a kind of coating material which has certain desirable properties, such as resistance to acid, resistance to heavy wet weather, resistance to wear, resistance to sun exposure, and so forth. Moreover, the supply of this coating material must be ample, its cost must be low, and it must be convenient to use before it can be produced in sufficient quantity to meet large-scale demand.

C-O-N-F-I-D-E-N-T-I-A-L

The China Boat Building Factory and the K'ai-lin (7030/2651) Paint Manufacturing Plant had worked together since the beginning of this year to test various types of durable paints for steel plates. As a result of 44 tests, only one type of paint was selected from 16 different types of paint. In the test, steel plates coated with the coating materials were covered with chemical solution having the same general corrosive property as excreta. After allowing the testing solution to stand for a long time at the temperature of 40 degrees centigrade, most of the steel plates coated with ordinary types of paint developed rust. However, the steel plate coated with this new type of paint showed no sign of damage after 4 months of testing. Similarly, steel plates coated with various other types of paints were separately submerged in excreta and river mud and then later were subjected to grinding 500 times back and forth on a planing table under a pressure of one kilogram. Most of the steel plates with layers of different types of paints were completely ground away after heavy grinding; however, the steel plate treated with the new type of paint withstood the grinding test without much wear or damage. The Shanghai Municipal Organic Chemical Works experimented with the new paint by subjecting it to heat in an oven test chamber at 60 degrees centigrade (equivalent to exposure to temperatures of the sun at noon time during the summer) and continuous exposure to artificial sunlight for 140 hours. In the examination of the true effects of steel plates coated with the new type of paint under natural conditions the Kai-lin paint manufacturing plant has taken a sample of the new product and placed it on a roof top, allowing the sun and rain to beat on it. Another sample was submerged in dung for a long period of time. Three pieces of steel plates treated with this new type of paint were placed in a boat for hauling excreta by a chemical fertilizer company. After several months and many inspections, the layers of new paint displayed no signs of changes. At present, the Kai-lin Paint Manufacturing Plant is trial-producing a batch of this new paint for individual testing during the warm summer months, and the final judgment of this product will be made at that time.

ACID-RESISTING CEMENT --Peiping, Jen-min Jih-pao, 4 Jun 63, p 6

An advertisement by the Ching-te-chen (2529/1795/6966) Municipal Cement Factory of Kiangsi Province announces the sale and supply of acid-proof cement. This cement is recommended for use against sulfuric acid, hydrochloric acid, nitric acid, all kinds of inorganic acids, and corrosion. It is also recommended for use in chemical works, paper manufacturing, acid manufacturing, beam construction material, metal works and metallurgy, and the manufacturing of fertilizer.

The acid-resisting cement is 93-98 percent acid resisting, with acid tensile strength of more than 20 kg/cm²; compression strength: more than 400 kg/cm².

CHINESE TRANSLATE FOREIGN MATERIALS ON RADIO RESEARCH -- Peiping, Wu-hsien-tien K'uai-pao (Express Bulletin On Radio), No 2, 25 Jan 63

[The following five articles from English and Russian publications have been translated into Chinese and published in the above source.]

1. "Slow-Wave Structure for M-Type Devices," by S. P. Yu and P. N. Hess, originally appearing in Institute of Radio Engineers Transactions, ED-9, No 1, pages 51-57, translated by Chang Te-liu (1728/1795/7511).

2. "Ferroelectric Harmonic Generator and the Large-Signal Micro-wave Characteristics of a Ferroelectric Ceramic," by M. Di Domenico, Jr., D. A. Johnson, and R. H. Pantell, originally appearing in Journal of Applied Physics, Volume 33, No 5, 1962, pages 1697-1706, translated by Wu I-tsun (0702/1744/1415).

3. "Phase-Amplitude Monopulse System," by W. Hausz and R. A. Zachary, originally appearing in Institute of Radio Engineers Transactions on Military Electronics, MIL 6, No 2, 1962, pages 140-146, translated by Huang Hsiang-fu (7806/7449/7450).

4. "Tunnel-Diode Full Binary Adder," by C. A. Renton and B. Rabinovici, originally appearing in Institute of Radion Engineers Transactions on Electronic Computers, Vol EC-11, No 2, 1962, pages 213-217, translated by Sun Pao-kuang (1327/1405/1342).

5. "The Tunnel-Triode and Its Technology," by A. Tewes, originally appearing as "Tunnel'nyi Triod i Ego Tekhnologiya" in Ekspres-Informatsiya Elektronika, No 32, 1962, translated by Wang Kuei-hua (3769/6311/5478). (FOR OFFICIAL USE ONLY)

CHINESE TRANSLATION OF FOREIGN RESEARCH ON RADIOS -- Peiping, Wu-hsien-tien K'uai-pao (Express Bulletin on Radios), No 22, 25 Nov 62

[The following three articles from English publications have been translated into Chinese and published in the above source.]

1. "The Use of Very Low Frequency Transmission To Compare Frequency Standards," by James D. Echols, originally appearing in Electronics, Vol 35, No 17, 1962, pages 60-63, translated by MA Shih-hsiung (7456/0013/7160).

C-O-N-F-I-D-E-N-T-I-A-L

2. "Long-Term Stability of Fixed Resistances," by H. F. Church, originally appearing in PIEE, part B, supplement, Volume 109, No 21, 1962, pages 19-27, translated by LIU Chinte (0491/6930/1795)

3. "Narrow-Band Television Uses Pseudo-Random Scan," from Stresemanns- Informations-Dienst, Deutsch (Stresemann's Information Service, in German), originally appearing in Electronics, Volume 35, No 17, 1962, edited by CHANG Chia-mo (1728/0857/6206)

EARTH SCIENCES

STUDY ON SHORT-TERM WEATHER FORECASTING -- Peiping, Scientia Sinica, Vol 12, No 3, Mar 63, pp 403-424

"Application of a Complete System of Thermohydrodynamic Equations for Short-Term Weather Forecasting on a Two-Level Model," originally published in Russian by Ts'eng Ch'ing-ts'un (2582/1987/1317), Institute of Geophysics, Chinese Academy of Sciences

This paper is a study of the experiment, applying complete equations for the prognosis of real fields of meteorological elements. The baroclinic atmosphere is examined for its importance in the development of synoptic formations. The author uses the two-level model, for which initial equations were applied by A. Eliassen and Zh. Smagorinsky. Three working patterns were programmed for the BESM-2 /High Speed Electronic Computer/ Computer/ Computation Center of The Academy of Sciences USSR. The method used by V. P. Sadokov (cf Doklady Akademii Nauk SSSR, volume 134, Number 3, 1960) was adopted for solving the vorticity equation at the mean level.

This work was completed in 1960 under the direction of I. A. Kibel', Corresponding Member of the Academy of Sciences USSR, at the Institute of Applied Geophysics of this academy. A summary of this paper was published in Doklady Akademii Nauk SSSR, Volume 137, No 1, 1961.

The manuscript was received for publication of 12 December 1962.

NINGHSIA ESTABLISHES METEOROLOGICAL STATIONS -- Peiping, Jen-min Jih-pao, 10 Jun 63, p 2

A network of meteorological stations has already been established throughout the Ninghsia Autonomous Region. According to the latest statistics of the meteorological bureau of this region, the average rate of accuracy in short-term, 24-hour weather forecasts was 85.4 percent; and in the first quarter of 1963, this rate was 2.3 percent higher than in the corresponding period of 1962.

Prior to the liberation, this area had only 2 simple weather stations established for military purposes, but now there are 10 times more observatory towers and weather stations established by the hsiens and municipalities. Fifty times more meteorologists than before the liberation were added to operate the increased number of weather stations established in the broad pastoral regions and mountainous areas of Ninghsia.

C-O-N-F-I-D-E-N-T-I-A-L

SUMMON RAIN AND MELT SNOW -- Peiping, K'o-hsueh Ta-chung (Popular Science), No 285, May 63, pp 12-13

In this article by Wang Chia-chien (3076/0857/6197) and Wang Chiung-yeh (3769/3518/5509), the writers described various contributions in the chemicalization of agricultural industries. In the work of safeguarding water supplies and antidrought, the use of dry ice (solid carbon dioxide) or silver iodine powder for the production of artificial rain was developed. In the arid regions in Northwest China, heat absorbent substances like carbon black can be spread over large areas of glacial and snow-covered areas in the high mountains to hasten the melting of snow and ice for the irrigation of agricultural fields and the prevention of droughts.

WUHAN COLLEGE OF GEODESY AND CARTOGRAPHY -- Peiping, Jen-min Jih-pao, Peiping, 3 May 63, p 4

An advertisement in this newspaper announces that registration is now opened for the 1964 class at the Wuhan College of Geodesy and Cartography. The new courses will include the following: geodesy, aerial surveying, fundamentals in survey work, and cartography.

C-O-N-F-I-D-E-N-T-I-A-L

BIOGRAPHIC INFORMATION

[The following information on selected Chinese Communist scientific and technical personnel was taken from sources cited in parentheses.]

CHANG Chung-nan, Moscow Agricultural Academy imeni K. A. Timiryazev; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Regulation of River Beds Under Dikeless Water-Diversion Installations," in Russian. (Moscow, Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, No 2, 16 Apr 63, p 236)

CHANG En, Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR; coauthor with A. I. Tugarinov and V. B. Naumov of article, "Experimental Reproduction of Alkali-Carbonate Metasomatism," in Russian; received for publication 24 October 1962. (Moscow, Akademiya Nauk SSSR, Geokhimiya, No 6, Jun 63, pp 570-578)

CHANG Kung-fu (1728/0361/7450), Surgery Department, Shanghai Posts and Telecommunications Hospital; author of an article, "Observations on the Healing of Surgical Incisions." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 156-158)

CHANG Ti-sheng (1728/3321/3932)

SHIH Chi-hsiang (0670/3444/3276)
Both of the Burn Department, Kuang-tz'u Affiliated Hospital, Shanghai Second Medical College; coauthors of an article, "A Discussion of Problems in Burn Excision Over Extensive Areas." (Peiping, Chung-hua Wai-k'o tsa-chih, Vol 11, No 2, Feb 63, pp 117-119)

CH'ANG Wang-hao, Moscow State University; author of dissertation for the scientific degree of Candidate of Physicomathematical Sciences, "Investigation of Radicals in Groups and Zero-Groups," in Russian. (Moscow, Vechernyaya Moskva, 10 Apr 63, p 4)

CHAO Hsun (6392/3169), Deputy Director, Institute of Linguistics and Philology, Chinese Academy of Sciences, delivered a report to a discussion conference held by the Sino-Bulgarian Friendship Association on 30 May. (Peiping, Jen-min Jih-pao, 31 May 63, p 3)

C-O-N-F-I-D-E-N-T-I-A-L

CH'EN Ching-jun (7115/2529/3387), Institute of Mathematics, Chinese Academy of Sciences; author of article, "Improvement on the Asymptotic Formulas for the Number of Lattice Points in a Region of the Three Dimensions (II)," in English; received for publication on 13 February 1963. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 751-764)

CH'EN P'eng (7115/7720)

HUANG Ch'i-chen (7806/0796/7201)

Both affiliated with the Research Institute of Coal Chemistry, Ministry of Coal Industries, Peiping; coauthors of articles, "Notes on the 'Mortar Theory' for the Carbonization of Coal Briquettes" and "A New Method of Estimating the Elastic Moduli of Coal Macerals by Microhardness Testing," in English; received for publication on 11 February 1963. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 915-917 and 917-918)

CH'EN Ping-huan (7115/3521/2719)

YUNG Ch'eng-kuang (7167/2052/0342)

Both of the Peking Municipal Institute of Neurosurgery; coauthors of an article, "A Discussion of Hemispherectomy in the Treatment of Malignant Gelatinous Brain Tumor." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 1-5)

CH'EN Sen-ch'iang, Moscow Institute of Petrochemical and Gas Industry; author of dissertation for the scientific degree of Candidate of Geological-Mineralogical Sciences, "Geological Structure and Analysis of Irrigation of D. Shkapovskiy's Productive Stratum of the Bashkir Petroleum Deposits, As Related to Its Treatment," in Russian. (Moscow, Moskovskaya Pravda, 31 May 63, p 4)

CH'EN Yu-shu, Institute of Machine Studies, Academy of Sciences USSR; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Research for Nearly-Periodical Solutions of Quasilinear Systems of Equations of Motion and Their Application to Investigation of Oscillations of a Rotor With Mobile Debalers," in Russian. (Moscow, Vechernyaya Moskva, 6 May 63, p 4)

C-O-N-F-I-D-E-N-T-I-A-L

CHIANG Ming-ch'ien (5592/2494/6197)

TAI Ts'ui-ch'en (2071/5488/6591)

Both affiliated with Institute of Chemistry, Chinese Academy of Sciences, Peiping; coauthors of article, "A Quantitative Relationship Between Molecular Structure and Chemical Reactivity: 1. Inductive Effect in Nonconjugated Systems," in English; first published in Chinese in Acta Chimica Sinica, Volume 28, No 5, 1962, pages 275-332. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 785-867)

CH'IEN Chih-ta (6929/0037/6671)

CHE Shu-lin (0772/2579/2651)

CHANG K'o-chien (1728/0455/0313)

All of the Peiping Fu-hsing Hospital; coauthors of an article, "Atherosclerotic Abdominal Aortic Aneurysmectomy and Similar Arterial Grafts." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 76-77)

CH'IEN Jen-yuan (6929/0086/0337)

YU Shih-ch'eng (0151/0013/6134)

KAO Yu-shu (7559/3768/2579)

All affiliated with Institute of Chemistry, Chinese Academy of Sciences, Peiping, coauthors of article, "Temperature Dependence of the Unperturbed Dimension of Polydimethylsiloxane," in English; received for publication on 18 March 1963. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 912-913)

CHIN Hui-sheng (6855/1920/3932)

WANG Te-k'uan (3769/1795/1401)

LIU Yun (0491/5089)

All of the Surgery Department, Chiao-ho Coal Mine Employee's Hospital, Kirin Province; coauthors of an article, "The Clinical Use of Looseleaf Plaster Splint in Joining Fractures." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 69)

C-O-N-F-I-D-E-N-T-I-A-L

CHIN Ti-yuan, Moscow State University; author of dissertation for the scientific degree of Candidate of Geological-Mineralogical Sciences, "Material Composition and Conditions for the Accumulation of Cretaceous Deposits in the Southwestern Part of Mountainous Crimea," in Russian. (Moscow, Vechernyaya Moskva, 8 May 63, p 4)

CH'IU Ching-hua (6726/2417/5478)

WU Ying-k'ai (0702/5391/1956)

Both of the Institute of Cardiovascular Diseases, Chinese Academy of Medical Sciences; coauthors of an article, "The Present Situation in the Surgical Treatment of Coronary Artery Insufficiency." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 159-165)

CHU Hsiao-tung (2612/2556/2639)

HU Hsu-tung (5170/2485/2639)

HOU Yu-lin (0186/1635/5259)

All of Fu-wai Hospital, Chinese Academy of Medical Sciences; coauthors of an article, "Anatomical Types and Typal Diagnosis of Atrial Septal Defect." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 41-44)

HO Ch'i-fang (0149/0366/5364), director, Institute of Literature, Chinese Academy of Sciences; subject was among those welcoming a Vietnamese literary delegation upon its arrival in Peiping. (Peiping, Kuang-ming Jih-pao, 13 Jun 63, p 1)

HSIEH T'ung (6200/2717)

HUANG Cheng (7806/2973)

Both of the Urology Section, Surgery Department, Shanghai Municipal First People's Hospital

TING Hsiao-hui (0002/1420/1920), Lung-ch'i Special District Hospital, Chang-chou, Fukien

All are coauthors of an article, "An Analysis of 27 Cases of Malignant Renal Tumor." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 62)

C-O-N-F-I-D-E-N-T-I-A-L

HSIN Yu-ling (6580/5148/7881), Thoracic Surgery Laboratory, Peking Institute of Tuberculosis; author of an article, "Preliminary Report on the Treatment of Massive Hemoptysis by Ligation of Pulmonary Artery." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 152-153)

HSIUNG Ch'ing-lai (3574/1987/0171), Institute of Mathematics, Chinese Academy of Sciences; author of article, "A Problem of Uniqueness With Respect to Meromorph Functions," in French; certain results of this note were announced in an oral report at a small Reunion of Mathematicians, held in Peiping on 29 January 1962. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 743-750)

HSU Shou-ch'un (1776/1343/2504)

HU Hsiao-ch'in (5170/1420/3830)

SHANG Te-yen (1424/1795/1693)

All of the Anesthesia Department, Fu-wai Hospital, Chinese Academy of Medical Sciences

KUO Chia-ch'iang (6753/0502/1730)

HSUEH Kan-hsing (5641/3227/5281)

HOU Yu-lin (0186/1635/5259)

All of the Heart Surgery Department, Fu-wai Hospital, Chinese Academy of Medical Sciences

All of the above are coauthors of an article, "The Use of Hypothermal Low-Flow Partial Perfusion in Open-Heart Surgery." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 93-97)

HU An-chou, Moscow Institute of Railroad Engineers; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Some Problems on the Theory of Schedules for Single-Track Lines in Organizing Through Junctions for Trains," in Russian. (Moscow, Vestnik Vsesoyuznogo Nauchno-Issledovatel'skogo Instituta Zheleznodorozhno Transporta, No 3, 23 May 63, p 65)

HU Ch'i-heng, Moscow Institute of Chemical Machine Building; author of dissertation for the scientific degree of Candidate of Technical Sciences, "On Applying the Maximum Principle in Solving Certain Problems on the Automation of Processes in Chemical Engineering," in Russian. (Moscow, Vechernaya Moskva, 21 May 63, p 4)

HUANG Chin-te (7806/6651/1795)

CH'EN Kuei-hsi (7115/6311/3556)

Both of the Surgery Department, P'ang-chia-pao Iron Mine Employee's Hospital, Lung-yen Iron and Steel Company; coauthors of an article, "Pelvic Cavity Dystopia With Spleen Torsion." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, p 101)

HUANG Ping-wei (7806/4426/4850), director, Institute of Geography, Chinese Academy of Sciences; author of an article, "A Refutation, Based on Geographical Facts, of the Erroneous Claims Advanced by India As Regards the Sino-Indian Border Problem." (Peiping, Ta Kung Pao, 13 Jun 63, p 3)

HUANG T'ien-ming, Moscow Higher Technical Institute imeni N. E. Bauman; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Dynamic Relations and Precision in Gear-Cutting," in Russian. (Moscow, Vechernaya Moskva, 21 May 63, p 4)

KUNG En (7895/1869), Shou-wang-fen Copper Mine Employee's Hospital, Hopeh Province; author of an article, "The Use of the Awl To Pry Into Place Metatarsal Dystopia Fracture and Dislocation." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 79)

KUO Chia-ch'iang (6753/0502/1720)

HSUEH Kan-hsing (5641/3227/5281)

HOU Yu-lin (0186/1635/5259)

All of the Heart Surgery Department, Fu-wai Hospital, Chinese Academy of Medical Sciences

HSU Shou-ch'un (1776/1343/2504)

SHANG Te-yen (1424/1795/1693)

All of the Anesthesia Department, Fu-wai Hospital, Chinese Academy of Medical Sciences

All of the above are coauthors of an article, "Open-Heart Surgery on Mitral Stenosis." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 128-132)

C-O-N-F-I-D-E-N-T-I-A-L

KUO Chu-ling (6753/5165/7227)

LI Han-min (2621/3352/3046)

YUAN Shih-hsiang (5913/0013/4382)

All of the Osteology Department, Tientsin People's Hospital; coauthors of an article, "The Use of Anterior Bone Graft in Spinal Fusion Therapy and Related Questions." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 21-26)

KUO Min-kao, Institute of Chemical Physics, Academy of Sciences USSR; author of dissertation for the scientific degree of Candidate of Chemical Sciences, "Characteristics of Kinetics of Polymerization of Acetylene Hydrocarbons," in Russian. (Moscow, Vechernaya Moskva, 8 May 63, p 4)

LI Ch'ang-ch'i, Kiev Polytechnic Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of High-Speed Operating Trackings of Hydraulic Duplicating Metal-Cutting Machines," in Russian. (Kiev, Pravda Ukrainskay, 5 Apr 63, p 4)

LI Jung-hsiang (2621/2837/5046)

HUANG Ming-k'ung (7806/2494/1313)

Both of the Surgery Department, Pa Hsien People's Hospital, Szechwan; coauthors of an article, "Report on Single Case of Acute Abdominal Obturation Complicated by Thoracic Subcutaneous Emphysema." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 49)

LI Ping-wei (2621/3521/1218), Polytechnic Institute, Inner Mongolia; author of article, "Improvement of Convergence in the Iteration Method With Respect to Multistory Frames," in Russian; the full Chinese text was published in The Chinese General Civil Engineering, No 2, 1962. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 918-919)

LING Chiang-hsing, Moscow Agricultural Academy imeni K. A. Timiryazev; Candidate of Biological Sciences; coauthor with A. I. Atabekova of article, "Comparative Embryological Investigation of the Genus *Lupinus* (Tourn) L.", in Russian. (Moscow, Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, No 2, 16 Apr 63, pp 219-222)

C-O-N-F-I-D-E-N-T-I-A-L

LIU Jui-hua (0491/3843/5478) Prof, director of Peking Municipal Institute of Otorhinolaryngology, died on 8 April 1963, after an extended illness, at the age of 71. (Peiping, Pei-ching Jih-pao, 10 Apr 63, p 3)

LIU Ping-sen (0491/3521/2773), Surgery Department, First Subsidiary Hospital, Chang-chia-k'ou Special School of Medicine; author of an article, "A Report on Two Cases of Prolapse of the Large Intesting." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, p 168)

LO Hsiung-ts'ai (5012/7160/2099), vice-president, Chungshan University; appointed to this post by the State Council on 20 May 1963. (Canton, Chung-kuo Hsin-wen, 22 May 63, p 2)

LU Hsueh-fu, Moscow Aviation Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "On the Problem of Optimum Control of Aircraft," in Russian. (Moscow, Vechernyaya Moskva, 20 May 63, p 4)

MA Yu (7456/5038), Surgery Department, Han-tan Special District Hospital; author of an article, "Report on Single Case of Double Appendicitis." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 34)

MAO Chi-wen (3029/4949/2429)

HU Ch'ang-tung (5170/2512/2639)

HOU Yu-lin (0186/1635/5259)

All of Fu-wai Hospital, Chinese Academy of Medical Sciences; co-authors of an article, "Nonocclusion of the Arerial Duct and Pulmonary Arterial Pressure." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, p 133-136)

MENG Hsien-chen, Leningrad Institute of Semiconductors, Academy of Sciences USSR; author of article, "Effect of Magnetic Anisotropy on a Spin-Wave Spectrum," in Russian; received for publication on 1 January 1963. (Moscow-Leningrad, Akademiya Nauk SSSR, Fizika Tverdogo Tela, Vol 5, No 6, Jun 63, pp 1611-1619)

C-O-N-F-I-D-E-N-T-I-A-L

MIN Kuei-jung, Power Engineering Institute imeni G. M. Krzhizhanovskiy, Academy of Sciences USSR; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Process of Heat Emission During Free Convection in Various Liquids," in Russian. (Moscow, Vechernaya Moskva, 21 May 63, p 4)

OU Tsu-k'ang (2962/4371/1660), Nanking People's Ku-lou Hospital; author of an article, "Pulmonary Arteriovenous Fistula." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 75)

PAI Kuang-min (4101/1684/2494)

CH'EN Ping-huan (7115/3521/2719)

YUNG Ch'eng-kuang (7167/2052/0432)

All of the Neurosurgery Department, Peking Hsuan-wu Hospital.

HUNG Ch'en-yuan (3163/3819/3293), Biochemistry Department, Peking Hsuan-wu Hospital

All of the above are coauthors of an article, "Animal Experiments and Clinical Observations on Using Urea To Lower Intracranial Pressure." (Peiping. Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 139-143)

P'AN Chun-hsiang (3382/0971/4382), Pa-li Hsien People's Hospital, Sinkiang [Uighur Autonomous Region]; author of an article, "An Opinion on 'A Preliminary Report on the Use of Small Splint Bandage in the Fixation of Limb Fracture.'" (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, p 16)

SHAO Ken-ta, Leningrad Railroad Engineers Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Features of a New Type Underground Station in Cambrian Clays," in Russian. (Moscow, Vestnik Vsesoyuznogo Nauchno-Issledovatel'skogo Instituta Zheleznodorozhного Transporta, Vol 3, 23 May 63, p 65)

SHEN Pao-k'ang, Moscow Construction Engineering Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of Sectional-Monolithic Porous Dams Made of Hollow Cylindrical Blocks," in Russian. (Moscow, Vechernaya Moskva, 10 May 63, p 4)

C-O-N-F-I-D-E-N-T-I-A-L

SHENG Chin-chang (4141/6855/4545), Institute of Geology and Palaeontology, Chinese Academy of Sciences; author of article, "The Marine Permian Formations and Their Fusulinid Zones of Southwest China," in English; received for publication on 7 February 1963. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 885-890)

SHIH Mei-hsin (4258/5019/9515)

WAN Te-hsing (8001/1795/2502)

LING Hung-ch'en (0407/1347/3819)

JEN Chang-yu (0117/7022/5940)

All of the Thoracic Surgery Department, Chung-shan Hospital, Shanghai First Medical College

FANG Chao-lin (2455/0340/7792)

HSIAO Ch'ang-szu (5135/1603/1835)

SHEN Yen-yuan (3088/5888/0337)

All of the Anesthesia Department, Chung-shan Hospital, Shanghai First Medical College

CH'EN Hao-chu (7115/3493/3796)

CH'EN Ch'ing-chang (7115/1987/3864)

KAO Yun-chu (7559/5686/3796)

All of the Cardiology Department, Chung-shan Hospital, Shanghai First Medical College

HUO Luan-ch'iang (7202/7019/6973), Thoracic Surgery Department, Shanghai First People's Hospital

All of the above are coauthors of an article, "Observations of Animal Experiments Involving Open-Heart Surgery Under Profound Hypothermia and Extracorporeal Circulation." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 90-92)

SUN Yen-ch'ing (1327/5888/1987)

CHIN Tan-nien (6855/2481/1628)

(Both of the Surgery Department, Peking Sino-Soviet Friendship Hospital; coauthors of an article, "Chylothorax and Its Surgical Management." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 148-151)

SUN Yu-k'un (1327/3768/3824)

TSOU Ch'eng-lu (6760/2110/7627)

Both affiliated with Institute of Biochemistry, Chinese Academy of Sciences, Shanghai; coauthors of article, "Studies on Papain: 3. Essential Histidine and Tryptophan Groups," in English; first published in Chinese in Acta Biochimica et Biophysica Sinica, Volume 2, 1962, pages 194-202. (Peiping, Scientia Sinica, Vol 12, No 6, Jun 63, pp 879-884)

SUNG Hsien-wen (1345/3759/2429)

CHIA Yu-min (6328/0147/3046)

KUO Hsing-t'ang (6753/5281/0781)

WANG Chi-min (3769/3444/3046)

All of the Osteo-Traumatology Department, Peking Chi-shui-t'an Hospital.

WANG Yun-chao (3769/0061/6856)

HSU Chun-ch'ao (1776/0689/6389)

Both of the Radiology Department, Peking Chi-shui-t'an Hospital.

All of the above are coauthors of an article, "The Anatomical Basis and Types of Intervertebral Discography." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 10-16)

TAI Chien-min, Moscow Technical Institute imeni Bauman; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of the Processes of Toroidal Coils," in Russian. (Moscow, Vechernyaya Moskva, 16 May 63, p 4)

T'ANG Shu-hsi, Moscow Institute of Railroad Engineers; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Selection of Methods for Strengthening the Traffic Capacity of Redesigned Single-Track Lines With Electric Traction Under the Conditions of the People's Republic of China," in Russian. (Moscow, Vestnik Vsesoyuznogo Nauchno-Issledovatel'skogo Instituta Zheleznodorozhnogo Transporta, No 3, 23 May 63, p 65)

C-O-N-F-I-D-E-N-T-I-A-L

T'AO Ting-lai (7118/7844/0171), vice-president, Chinese Academy of Agricultural Mechanization; author of an article, "Agricultural Mechanization in China." (Peiping, K'o-hsueh Ta-chung, No 5, May 63, pp 4-5)

TING Hsi-hung, Moscow Aviation Institute; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of Design Methods for Optimum Weight Structures With and Without Calculating Kinetic Heating," in Russian. (Moscow, Vechernyaya Moskva, 20 May 63, p 4)

TING Wei, coauthor with S. Ya. Gzovskiy and A. N. Planovskiy of article, "Investigation of the Kinetics of Solutions During Rabbling," in Russian. (Moscow, Khimicheskaya Promyshlennost', No 4, Apr 63, pp 286-292)

TS'AI T'ai-yuan, Institute of Geography, Academy of Sciences USSR; author of dissertation for the scientific degree of Candidate of Geographical Sciences, "Seasonal Course in the Development of the Landscape of the Central European Part of the USSR," in Russian. (Moscow, Vechernyaya Moskva, 10 May 63, p 4)

WANG Ch'en (3769/6591)

MENG Ch'ing-yu (1322/1987/0151)

KUAN Yung-ho (7070/3057/0735)

CHANG Shu-ch'uan (1728/2883/3123)

All of the Surgery Department, Ch'ien-shan Tuberculosis Hospital, Anshan; coauthors of an article, "Intensified Thoracoplasty in the Treatment of Pulmonary Tuberculosis." (Peiping, Chung-hua Wei-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 154-155)

WANG Ken-shih, Moscow State University; coauthor with L. N. Komissarova and Viktor I. Spitsyn of article, "Nafnates of Lanthanum and Neodymium," in Russian; received for publication on 1 February 1963. (Moscow, Doklady Akademii Nauk SSSR, Vol 150, No 4, 1 Jun 63, pp 816-819)

WANG Mao-hua, Moscow Agricultural Academy imeni K. A. Timiryazev; author of article, "Regimes of Work of an Electric Drive on a Light Rope Arable Aggregate," in Russian; received for publication on 17 December 1962. (Moscow, Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, No 2, 16 Apr 63, p 235)

WANG Yuan-ch'ang (3769/3293/2512)

CHANG T'ien-hui (1728/1131/1920)
Both of Tientsin Medical College.

WANG Erh-k'o (3769/0059/0668)

MEI Keng-nien (2734/1649/1628)
Both of An-yang Special District People's Hospital.

LIU Chen-hua (0491/7201/5478), Hopeh Medical College

LI P'ing (2621/1627)

WU Ying-k'ai (0702/5391/1956)
Both of Fu-wai Hospital, Chinese Academy of Medical Sciences.

All of the above are coauthors of an article, "Progress in Selective Hypothermal Extracorporeal Circulation," and all are members of the North China Cardiovascular Surgery Cooperative Team. (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 98-101)

YANG Kuei-t'ung, Institute of Mechanics; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Calculation of Structures on the Action of Random Loads," in Russian. (Moscow, Moskovskaya Pravda, 22 May 63, p 4)

YU P'ei-li (0060/1014/4409), Osteology Department, East Hospital, Anshan Iron and Steel [Company] (An-kang-t'ieh Tung I-yuan; 7254/6921/6993/2639/6829/7108); author of an article, "Early Care of Bladder in Cases of Spinal Cord Trauma." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 1, Jan 63, pp 59-61)

YU P'ei-li (0060/1014/4409), Osteology Department, East Hospital, Anshan Iron and Steel [Company]; author of an article, "Clinical Application for Stainless Steel Bone Plates." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, pp 144-147)

C-O-N-F-I-D-E-N-T-I-A-L

YU Pen-ch'uan (0060/2609/3123), Surgery Department, Ch'ang-ch'un Hospital; author of an article, "Report of Single Case of Puncture of Ventricular Septum by Foreign Object." (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, p 136)

YU Yen-shou (0060/1693/1108), Osteology Department, Tibet Army General Hospital; author of an article, "Two Opinions on the Paper 'Fracture Complicated by Shock.'" (Peiping, Chung-hua Wai-k'o Tsa-chih, Vol 11, No 2, Feb 63, p 122)

YUN Lien, All-Union Institute of Helminthology imeni K. I. Skriabin; author of dissertation for the scientific degree of Candidate of Biological Sciences, "Helminthofauna of Rodents and Insectivora in the Southern Regions of Siberia and the Far East," in Russian. (Moscow, Vechernaya Moskva, 10 May 63, p 4)

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UNCLASSIFIED
Central Intelligence Agency



Washington, DC 20501

7 September 2004

Ms. Roberta Schoen
Deputy Director for Operations
Defense Technical Information Center
7725 John J. Kingman Road
Suite 0944
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the "Non-NIS" referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

A handwritten signature in black ink that reads "Sergio N. Alcivar".

Sergio N. Alcivar
Chief, CIA Declassification Center,
Declassification Review and Referral
Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)

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Processing of OGA-Held CIA Documents



The following CIA documents located at DTIC were reviewed
by CIA and declassification guidance has been provided.

OGA Doc ID	Job Num	Box	Fltr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0336308	78-03117A	194	1	23	4363	Scientific Information Report Chemistry And Metallurgy (26)	3/7/1963	71	Approved For Release	3/25/2004
AD0335625	78-03117A	197	1	3	4460	Scientific Information Report Chemistry And Metallurgy (27)	4/4/1963	51	Approved For Release	3/25/2004
AD0336825	78-03117A	199	1	26	4562	Scientific Information Report Chemistry And Metallurgy (28)	5/9/1963	70	Approved For Release	3/25/2004
AD0332150	78-03117A	183	1	5	3916	Scientific Information Report Chinese Science (11)	10/4/1962	52	Approved For Release	3/29/2004
AD0332434	78-03117A	183	1	40	3951	Scientific Information Report Chinese Science (12)	10/19/1962	59	Approved For Release	3/29/2004
AD0332795	78-03117A	184	1	37	3988	Scientific Information Report Chinese Science (13)	11/5/1962	48	Approved For Release	3/29/2004
AD0333069	78-03117A	186	1	7	4028	Scientific Information Report Chinese Science (14)	11/16/1962	30	Approved For Release	3/29/2004
AD0333148	78-03117A	187	1	19	4078	Scientific Information Report Chinese Science (15)	11/29/1962	44	Approved For Release	3/29/2004
AD0333835	78-03117A	189	1	6	4144	Scientific Information Report Chinese Science (16)	12/21/1962	65	Approved For Release	3/29/2004
AD0334108	78-03117A	190	1	2	4179	Scientific Information Report Chinese Science (17)	1/10/1963	56	Approved For Release	3/29/2004
AD0334105	78-03117A	191	1	12	4230	Scientific Information Report Chinese Science (18)	1/18/1963	25	Approved For Release	3/29/2004
AD0334378	78-03117A	192	1	21	4277	Scientific Information Report Chinese Science (19)	2/1/1963	27	Approved For Release	3/29/2004
AD0334433	78-03117A	193	1	22	4322	Scientific Information Report Chinese Science (20)	2/15/1963	28	Approved For Release	3/29/2004
AD0335021	78-03117A	194	1	37	4377	Scientific Information Report Chinese Science (21)	3/8/1963	59	Approved For Release	3/29/2004
AD0335847	78-03117A	198	1	33	4526	Scientific Information Report Chinese Science (22)	4/18/1963	61	Approved For Release	3/29/2004
AD0336327	78-03117A	200	1	3	4578	Scientific Information Report Chinese Science (23)	5/2/1963	68	Approved For Release	3/29/2004
AD0337167	78-03117A	201	1	26	4643	Scientific Information Report Chinese Science (24)	5/23/1963	95	Approved For Release	3/29/2004
AD0337777	78-03117A	202	1	27	4687	Scientific Information Report Chinese Science (25)	6/6/1963	52	Approved For Release	3/29/2004
AD0338474	78-03117A	203	1	27	4727	Scientific Information Report Chinese Science (26)	6/20/1963	83	Approved For Release	3/29/2004
AD0338687	78-03117A	204	1	32	4772	Scientific Information Report Chinese Science (27)	7/5/1963	80	Approved For Release	3/29/2004
AD0339386	78-03117A	206	1	4	4820	Scientific Information Report Chinese Science (28)	7/17/1963	32	Approved For Release	3/29/2004
AD0339147	78-03117A	207	1	11	4862	Scientific Information Report Chinese Science (29)	7/30/1963	48	Approved For Release	3/29/2004
AD0340927	78-03117A	208	1	35	4924	Scientific Information Report Chinese Science (30)	8/21/1963	53	Approved For Release	3/29/2004
AD0341855	78-03117A	209	1	43	4974	Scientific Information Report Chinese Science (31)	9/5/1963	46	Approved For Release	3/29/2004
AD0342464	78-03117A	210	1	38	5013	Scientific Information Report Chinese Science (32)	9/16/1963	43	Approved For Release	3/29/2004
AD0342608	78-03117A	211	1	36	5054	Scientific Information Report Chinese Science (33)	9/27/1963	41	Approved For Release	3/29/2004